

IN THE CLAIMS:

Please rewrite claim 1; and cancel claims 6, 7, 19 and non-elected claims 10 to 18 without prejudice or disclaimer; and add new claims 20 to 31 all as follows:

1. (currently and previously amended) A method for forming an elongated fused quartz article comprising:

feeding a generally SiO₂ material into a furnace melting zone comprising a refractory material wall with a protective lining selected from the group consisting of rhenium, osmium, iridium[, platinum] and mixtures thereof;

fusing said SiO₂ material in a gas atmosphere of the melting zone of said furnace [under a] , said gas atmosphere comprising at least one carrier gas and an oxidizing gas; and

drawing the fused SiO₂ material from the furnace to form said article.

2. (cancelled)

3. (original) The method of claim 1 wherein said carrier gas is hydrogen or a noble gas.

4. (original) The method of claim 1 wherein said oxidizing gas is water vapor.

5. (original) The method of claim 1 being a continuous process.

6. (cancelled)

7. (cancelled)

8. (previously amended) The method of claim 1, wherein said refractory material is comprised of tungsten, molybdenum or mixtures thereof.

9. (previously amended) The method of claim 1, wherein said protective lining material comprises rhenium.

10. (canceled)

11. (canceled)

12. (canceled)

13. (canceled)

14. (canceled)

15. (canceled)

16. (canceled)

17. (canceled)

18. (canceled)

19. (cancelled)

20. (new) A method for forming an elongated fused quartz article comprising:

feeding a SiO₂ material into a furnace melting zone comprising a refractory material wall with a protective lining selected from the group consisting of rhenium, osmium, iridium and mixtures thereof;

feeding a gas mixture comprising at least one inert carrier gas and an oxidizing gas into the protectively lined furnace melting zone;

fusing the SiO₂ material in the protectively lined melting zone of the furnace in the presence of the gas mixture; and

drawing the fused SiO₂ material from the furnace to form the fused quartz article.

21. (new) The method of claim 20, wherein the carrier gas is hydrogen or a noble gas.

22. (new) The method of claim 20, wherein the oxidizing gas is water vapor or air.

23. (new) The method of claim 20, wherein the oxidizing gas is water vapor.

24. (new) The method of claim 20, wherein the oxidizing gas is air

25. (new) The method of claim 20, wherein the gas mixture comprises hydrogen with a dew point of greater than 30°C.

26. (new) The method of claim 20, wherein the gas mixture comprises hydrogen with a dew point of greater than 50°C.

27. (new) The method of claim 20, wherein said protective lining material comprises rhenium.

28. (new) The method of claim 20, wherein said refractory material comprises tungsten, molybdenum or mixtures thereof.

29. (new) The method of claim 20, comprising drawing a fused SiO_2 material having less than 10 ppb dissolved refractory metal content from the furnace.

30. (new) The method of claim 20, comprising drawing a fused SiO_2 material having less than 1 ppb dissolved refractory metal content from the furnace.

31. (new) The method of claim 20, comprising fusing the silica at a temperature in excess of 2050 °C.